

Comments on  
Part 3 Responsiveness Summary in  
'Record of Decision Brown and Bryant Operable Unit No.2 Superfund Site,' US EPA Region 9,  
San Francisco, CA, September 2007

[[http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/951b65b4f842e4fc8825736b006ee37e/\\$FILE/B&B%20FINAL%20ROD%20September\\_%202007%2009-30-07.pdf](http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/951b65b4f842e4fc8825736b006ee37e/$FILE/B&B%20FINAL%20ROD%20September_%202007%2009-30-07.pdf)]

Comments by  
G. Fred Lee, PhD, PE, BCEE, F.ASCE and Anne Jones-Lee, PhD  
G. Fred Lee & Associates  
El Macero, California

November 21, 2011

Part 3 of the Record of Decision (ROD) provides responses to summarized and paraphrased comments and concerns raised during the public meetings as well as expressed in written comments. The following comments address a number of the aspects of those responses that are of concern from a technical standpoint.

In this discussion, we make reference to our "Flawed Technology" review and its cited works as a source for additional discussion of the technical foundation for issues and conclusions we discuss herein. That report is available as:

Lee, G. F., and Jones-Lee, A., "Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste," Report of G. Fred Lee & Associates, El Macero, CA, December (2004).  
Updated July (2011). <http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf>

Comment #1 stated,

*"During the June 21, 2007 and August 9, 2007 Public Meetings, several people indicated that they are concerned about the water quality that they consume and potential health hazards and that the B&B Site has contaminated the City of Arvin municipal drinking water with contaminants of concern (COCs)."*

The US EPA acknowledged in its response that COCs have been found in city well below the MCLs. As discussed in our "Flawed Technology" review as well as other TAG advisor reports posted on the CBA Brown & Bryant Superfund Site website [[http://www.gfredlee.com/CBA\\_BBSite/CBA\\_BBSite.htm](http://www.gfredlee.com/CBA_BBSite/CBA_BBSite.htm)], this is a very dangerous situation that should have been immediately remediated by replacing that well. It cannot be assumed that the fact that MCLs for the chemicals tested were not exceeded means that the water is safe for consumption or other uses. There can be unmeasured pollutants present that are a threat to public health in drinking water; some MCLs, including those for arsenic and chloroform, were not established at levels that ensure a high degree of protection of public health.

Comment #2 stated:

*"During the June 21, 2007 Public Meeting, several people indicated that the existing tank and structures at the Site are contaminated and EPA has not taken any action during the past 15 – 20*

*years to address contaminated structures and groundwater contamination. Several individuals also commented that EPA has not adequately notified the public of Site remedial activities.”*

In response the US EPA recounted measures that had been taken, including the removal of the sludge and cleaning of the tank. It also stated,

*“EPA is in process of removing this tank from the Site. The actions also included contaminated surface soil removal and disposal, subsurface soil and groundwater investigations, as discussed in the OU-2 RI/FS Report, to minimize or eliminate immediate threats to human health and the environment as a part of OU-1. EPA completed an extensive OU-2 RI/FS to address groundwater contamination at the Site. Investigation of soil vapor and groundwater has been completed at the B&B site.”*

“Comment #3

*During the June 21st Public Meeting, an individual handed a petition to the EPA RPM, which included the following five demands:*

- 1. EPA develop a new proposed plan to clean Arvin’s groundwater with assistance and oversight by a citizen group,*
- 2. The new proposed plan cleans all affected groundwater and remove contaminated soil from the Site,*
- 3. EPA translate all Brown & Bryant documents and materials to Spanish before taking further action,*
- 4. EPA pays for independent water quality testing of Arvin’s groundwater, and*
- 5. EPA insures that new replacement wells are constructed and operational before closing any municipal wells. We all deserve clean water.*

The US EPA’s response to item 1 was basically that the OU-2 remediation plan follows Superfund guidelines, that all alternatives have already been examined, and that the public has had its opportunity to provide input. First, it is important to recognize that following Superfund guidelines does not ensure protection of public health/welfare or groundwater quality. The technical foundation for that conclusion has been discussed in the general context in our “Flawed Technology” review paper cited above; other TAG advisor reports and posted on the CBA Brown & Bryant Superfund Site website [[http://www.gfredlee.com/CBA\\_BBsite/CBA\\_BBsite.htm](http://www.gfredlee.com/CBA_BBsite/CBA_BBsite.htm)] discuss this issue with specific reference to the B&B Site.

The issue of active public oversight of the remediation is critical and should not have been dismissed by the US EPA as something that the public has already had its opportunity to do. Our participation in the process by a Technical Assistance Grant advisor as of October 2011 provides an opportunity for oversight by the public.

In response to item 2 the US EPA stated,

*“The C-zone groundwater is not impacted by the Site COCs above the MCLs.”*

This means that the Corcoran Clay is not an effective barrier capable of effectively preventing pollutants in B zone from polluting the C zone. The USGS Central Valley Ground Water Model reports that the Corcoran Clay is permeable. As discussed in detail in our “Flawed Technology” review cited above, as well as in other TAG advisor reports on the CBA B&B Site website, the

fact that measured concentrations of contaminants do not exceed their MCLs is no assurance that the water poses no threat to public health/welfare or groundwater quality.

US EPA stated in response to item 2,

*“The NCP and other Federal regulation require any proposed remedial action to be protective of the public health and the environment.”*

The fact that regulations *“require any proposed remedial action to be protective”* is no assurance that the remedial action would, in fact, provide protection of public health/welfare and groundwater resources for as long as the chemicals at the site remain a threat. While the proposed remedial actions, if reliably executed, maintained, and monitored, could offer a degree of protection, they are not necessarily comprehensive or reliable.

Comment #4 noted several concerns, including

*“Commenters demanded environmental justice and indicated that there is discrimination against the Latino population and poor people and they expect respect and urgency from the EPA.”*

and

*“One individual showed concern with all remedial alternatives; one commented that nothing has been done at the Site for 25 years; one indicated that EPA studies do not suggest Alternative 3 [Alternative 3: Source reduction in the A-zone and no action in the B-zone] as the preferred remedy, and if no improvement is made after a certain period, then Alternative 6 [Alternative 6: Groundwater extraction and treatment in the A-zone and the B-zone] should be implemented.”*

In response to Comment #4, the US EPA stated,

*“Alternative 6 is not an appropriate remedy for the B&B Site OU-2, as discussed in detail in response to Comment #6.”*

Alternative 6 – pump and treat A and B zones – and vapor extraction would be more efficacious than Alternative 2: Monitored natural attenuation (MNA). US EPA’s reasoning supporting its claims that pump and treat will not be as effective as MNA is not convincing.

In its response to Comment #6, the US EPA stated,

*“Alternative 6 [pump and treat] has an estimated cost of \$70,489,000, compared to the estimated cost of \$15,585,000 for the preferred/selected remedy in the Proposed Plan.”*

In its response to Comment #7, the US EPA stated,

*“EPA intends to implement a full cleanup of the Site so it does not create any risk to human health or the environment.”* It appears that this “intent” is meant within the constraints of Superfund investigation/remediation approach, i.e., as determined based on exceedance of MCLs. As discussed in our “Flawed Technology” review, and noted above, in no way does that approach ensure that there will be no risk to human health or the environment. Issues such as the nature of MCL values relative to protecting human health and groundwater quality, chemicals that may be associated with the waste for which there are no regulatory values for the protection of public health/welfare or groundwater quality, as well as the need to monitor for unrecognized pollutants remain unaddressed.

The US EPA repeatedly stated in the ROD, issued in 2007, that the City well will be replaced. Five years have now passed and that well still has not been replaced.

Comment #9 addresses comments submitted by the Center on Race, Poverty & the Environment (CRPE) including:

*“We [CRPE] request that EPA adopt a combination of Alternative 3 and Alternative 5; institute performance standards which, if not met, will trigger additional remedial action to decontaminate groundwater; remediate A and B-Zone contaminated soils; transmit all future monitoring results from the monitoring wells and city well #1 to CBA; immediately install a new drinking water well to replace city well #1; install additional monitoring wells around city well #1 to better track the movement of the contamination; and provide for continuing collaboration with CBA.”*

Those requests were largely reasonable and technically appropriate. The US EPA’s response, *“EPA is committed to assure that the soils and groundwater at the B&B Site does not pose a threat to human health and the environment.”* is not supported by its actions.

The US EPA continues to argue against pump and treat of B zone groundwater, apparently on the basis of cost.

The US EPA also replied:

*“The US EPA stated, EPA will continue groundwater monitoring until data shows that the Site is no longer a threat to human health or the environment and the COCs are below MCLs. EPA maintains monitoring reports in the Site administrative record file, and the reports are available for review. EPA will also provide monitoring results upon request, or notify the appropriate authority if the results show any threat to human health or the environment. The groundwater monitoring results are also provided to CDHS.”*

The monitoring results should be made available to the public as they are developed. The US EPA also does not demonstrate how the assessment will be made that *“data shows (sic) that the Site is no longer a threat to human health or the environment”*. It appears from the ROD that this determination will be made on the basis of comparison of measured concentrations with MCLs or other regulatory values that may well not be indicative of threat to human health or environmental quality. There is also no indication given as to how long beyond the 30-year postclosure period the US EPA is willing to continue groundwater monitoring.

The US EPA also replied,

*“EPA will install new monitoring wells for tracking and additional investigation of the B-zone groundwater plume as a part of the remedy implementation. EPA will continue groundwater monitoring until data shows that the Site is no longer a threat to human health or the environment.”*

Lacking in the response are the details of the placement of B zone monitoring wells, or reference to where those details may be found. Also not addressed is how the 30-year postclosure period in RCRA impact long-term monitoring of the site.

The US EPA also replied,

*“All groundwater monitoring results will continue to be provided to the public through the Administrative Record at the local library. The public is welcome to review these documents and comment on them at any time.”* The local library is not necessarily reliable as a good, single repository of information. Hours of operation can affect how “available” those documents actually are to the local population.

The US EPA also replied:

*“Due to the caps and fencing it is not reasonable to expect any exposure to children or young adults from this Site; therefore, the risk assessment does not include this pathway.”*

This response does not consider commonly encountered problems of inadequate maintenance of fencing, or of trespass onto fenced property.

In response to Comment #9.4 Conclusion, the US EPA made the following sweeping assurances that are misleading as they cannot be ensured based on the information provided in the ROD:

*“EPA has taken all appropriate actions to mitigate and eliminate any threat to human health and the environment from contamination at the B&B Site based on extensive investigations. EPA’s preferred/selected alternative addresses all contamination at the Site. The selected remedy includes appropriate monitoring, review and evaluation requirements to ensure that it is protective of human health. It is EPA’s intent to involve community participation during remedy selection process, and select an appropriate remedy to protect human health and the environment.”*

In response to Comment #10, the US EPA stated,

*“Based on monitoring data, EPA agrees that to date, the City Well CW-1 has not been contaminated above MCLs. The groundwater monitoring indicates that the B-zone groundwater plume may be migrating slowly in the direction of the Arvin City Well CW-1. Arvin City Well CW-1 is completed in the C-zone aquifer that is hydraulically separated from the B-zone by the Corcoran Clay layer. The well construction data indicate that the annular space of the Well CW-1 may be gravel packed and is not sealed off through the B-zone, which could provide a conduit for cross contamination. Arvin City Well CW-1 is at a risk of contamination from the Site COCs, and should be abandoned and replaced as soon as possible to eliminate potential risk to human health and the environment. EPA will maintain groundwater quality monitoring for this well until it is properly abandoned and replaced. Abandonment of the Arvin City well CW-1, or any other well that could be a conduit for cross contamination of the C-zone aquifer guarantees a clean water source for the City of Arvin. Currently, the C-zone aquifer is not impacted and is hydraulically separated from the B-zone by the Corcoran Clay layer.”*

Again, this response is misleading as it does not consider the principles of preventive public health practice.